

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims

1. (Currently amended) A method for determining whether a reagent which is suspected of having a pharmaceutical activity has an effect on monitoring eukaryotic cell integrity ~~under test conditions that are suspected of causing cell lysis,~~ the method comprising

(i) adding the reagent to ~~subjecting a cell culture to the conditions, and incubating the cell culture for a period of time sufficient to allow the reagent to cause cell lysis,~~

(ii) adding adenosine diphosphate (ADP) to the cell culture under conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase, and

(iii) detecting ATP in the cell culture and relating that to the presence of adenylate kinase and thus to the eukaryotic cell integrity.

Claims 2-5 Cancelled.

6. (Currently amended) The A method of ~~according to claim 5~~ 1, wherein the cell culture preparation is a tumor ~~tumour~~ cell line in culture medium and the reagent is suspected of having anti-cancer applications.

Claims 7-9 cancelled.

10. (Currently amended) The A method of ~~according to~~ claim 1, which is used in toxicity testing.

11. (Currently amended) A method for determining whether a reagent has an effect on the growth of eukaryotic cells ~~monitoring the condition of eukaryotic cells in a cell culture under a test condition~~, the method comprising

(i) ~~culturing a cell culture under the test condition~~; adding the reagent to a cell culture and incubating the cell culture for a period of time sufficient for the reagent to affect the growth of the cell culture;

(ii) lysing cells in the cell culture;

(iii) adding a denosine diphosphate (ADP) to the cell culture under conditions that allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and

(iv) detecting ATP in the cell culture and relating that to the condition of the ~~one or more~~ cells.

12. (Currently amended) The A method of ~~according to~~ claim 11 wherein the initial cell culture contains a known amount of cells, ~~and in step (i), it is cultured under test conditions which are suspected of affecting the condition of the cells.~~

Claim 13 Cancelled.

14. (Currently amended) The A method of ~~according to~~ claim ~~13~~ 11 wherein the reagent is a compound that ~~which~~ is being screened for growth factor activity.

Claims 15-19 Cancelled.

20. (Currently amended) The A method of according to claim 11, wherein the cells are lysed by addition of a lytic agent.

21. (Previously Amended) A test kit for performing a method according to claim 1, which comprises substantially pure ADP, detection reagents and cell culture medium.

22. (Currently amended) The A test kit of according to claim 21 wherein the detection reagents are luciferase/luciferin, which is substantially free of contaminating enzymes.

Claim 23 cancelled.

24. (New) A method for determining whether a particular condition selected from a particular temperature, pH, pressure, irradiation or the presence of a particular gaseous environment has an effect on eukaryotic cell integrity, the method comprising

(i) subjecting a cell culture to the particular condition for a period of time sufficient to allow cell lysis to occur,

(ii) adding a deinosine diphosphate (ADP) to the cell culture under conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and

(iii) detecting ATP in the cell culture and relating that to the presence of adenylate kinase and thus to the eukaryotic cell integrity.

25. (New) A method for diagnosing infection by a lytic virus, the method comprising

(i) obtaining a sample of cells from a patient suspected of having a lytic virus infection,

(ii) incubating the cells in culture medium for a period of time sufficient to allow any virus present to cause cell lysis,

(iii) adding a deoxyribose diphosphate (ADP) to the cell culture under conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and

(iv) detecting ATP in the cell culture and relating that to the presence of adenylate kinase and thus to the presence or absence of lytic virus in the cell culture.

26. (New) The method of claim 25 for the diagnosis of polio infection.

27. (New) A method for determining whether a particular temperature, pH, pressure, irradiation or the presence of a particular gaseous environment has an effect on the growth of eukaryotic cells, the method comprising

(i) subjecting a cell culture to the particular temperature, pH, pressure, irradiation or the presence of a particular gaseous environment, and incubating the cell culture for a period of time sufficient for the condition to affect the growth of the cell culture,

(ii) lysing cells in the cell culture;

(iii) adding a deoxyribose diphosphate (ADP) to the cell culture under conditions that allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and

(iv) detecting ATP in the cell culture and relating that to the condition of the cells.

28. (New) A method for determining whether a reagent has an anti-cancer application, the method comprising

- (i) adding the reagent to a tumor cell line and incubating the tumor cell line for a period of time sufficient to allow the reagent to cause cell lysis,
- (ii) adding adenosine diphosphate (ADP) to the tumor cell line under conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and
- (iii) detecting ATP in the tumor cell line and relating that to the presence of adenylate kinase and thus to the ability of the reagent to lyse tumor cells.

29. (New) A method for determining whether a reagent has a toxic effect on eukaryotic cells, the method comprising

- (i) adding the reagent to a eukaryotic cell culture and incubating the eukaryotic cell culture for a period of time sufficient to allow the reagent to cause cell lysis,
- (ii) adding adenosine diphosphate (ADP) to the eukaryotic cell culture under conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and
- (iii) detecting ATP in the eukaryotic cell culture and relating that to the presence of adenylate kinase and thus to the toxicity of the reagent in that it is able to lyse eukaryotic cells.

30. (New) A method for determining whether an agent which is suspected of having cell lytic activity has an effect on eukaryotic cell integrity, the method comprising

- (i) adding the agent to a cell culture and incubating the cell culture for a period of time sufficient to allow the agent to cause cell lysis,

(ii) adding a denosine d iphosphate (ADP) t o t he c ell c ulture u nder conditions which allow the conversion of ADP to adenosine triphosphate (ATP) by cellular adenylate kinase; and

(iii) detecting ATP in the cell culture and relating that to the presence of adenylate kinase and thus to the eukaryotic cell integrity.

31. (New) The method of claim 30, wherein the agent is a peptide, protein or a virus.